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METEOROLOGICAL DATA REPOR

12814A LANCE MISSILE NO. 2714, ROUND NO. 2 (30 September 1976)

BY

WSMR METEOROLOGICAL TEAM

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ATMOSPHERIC SCIENCES LABORATO WHITE SANDS MISSILE RANGE, NEW M

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UNITED STATES ARMY ELECTRONICS COMMAND

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Meteorological data gathered for the launchi Missile Number 2714, Round Number 288 AST, are pr	ng of 12814 Lance,

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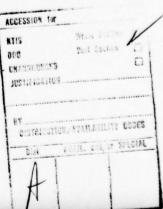
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INTRODUCTION

12814A Lance, Missile Number 2714, Round Number 288 AST, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1400 HRS MDT, 30 September 1976. The scheduled launch time was 1400 HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	3,997.64	FEET/MSI
PRESSURE	881.8	MBS
TEMPERATURE	28.9	°c
RELATIVE HUMIDITY	19	%
DEW POINT	3.1	°c
DENSITY	1,015.5	GM/M ³
WIND SPEED	04	KNOTS
WIND DIRECTION	120	DEGREES
CLOUD COVER	.8	Ci

TABLE I. SURFACE OBSERVATIONS TAKEN AT LC-33, 1400 HRS MDT/30 SEPTEMBER 1976.

ELEVATION	3,990.0	FEET/MSI
PRESSURE	882.0	MBS
TEMPERATURE	27.5	°C
RELATIVE HUMIDITY	19	%
DEW POINT	1.7	°C
DENSITY	1,017.0	GM/M ³
WIND SPEED	05	МРН
WIND DIRECTION	190	DEGREES
CLOUD COVER	8	Ci

TABLE II. SURFACE OBSERVATIONS TAKEN AT WSD, 1400 MRS MDT/30 SEPTEMBER 1976.

	·		•			
HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)		HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	170	3.0		2100	100	6.0
100		CALM		2200	110	7.0
200		CALM		2300	120	7.0
300	045	1.0		2400	125	5.0
400	100	3.0		2500	140	6.0
500	155	2.0		2600	125	5.0
600	115	1.0		2700	115	7.0
700	180	2.0		2800	105	10.0
800	075	2.0		2900	095	6.0
900	115	2.0		3000	115	9.0
1000	145	4.0		3100	115	9.0
1100	135	4.0		3200	125	8.0
1200	140	4.0		3300	125	7.0
1300	130	3.0		3400	125	7.0
1400	130	5.0		3500	115	8.0
1500	120	5.0		3600	120	7.0
1600	125	6.0		3700	125	8.0
1700	130	5.0		3800	120	7.0
1800	120	4.0		3900	130	6.0
1900	110	5.0		4000	120	7.0
2000	110	5.0		4100	125	6.0

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-33, AT 1355 MDT/30 SEPTEMBER 1976
12814A LANCE, MISSILE NO. 2714, ROUND NO. 288 AST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 1/8 MILE SOUTH OF LAUNCHER.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	125	6.0
4300	125	6.0
4400	130	7.0
4500	125	6.0
4600	125	6.0
4700	130	6.0
4800	135	5.0
4900	115	5.0
5000	120	4.0
5100	105	4.0
5200	105	4.0
5300	135	3.0
5400	135	3.0
5500	120	3.0
5600	090	2.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	135	2.0
5800	070	
5900	105	
6000	075	
6100	090	2.0
6200	080	3.0
6300	100	4.0
6400	080	4.0
6500	110	3.0
6600	100	5.0
6700	105	6.0
6800	105	6.0
6900	095	6.0
7000	115	5.0

TABLE III. (CONT)

HEIGHT	DIRECTION	SPEED	HEIGHT	DIRECTION	SPEED
(FEET)	(DEGREES)	(MPH)	(FEET)	(DEGREES)	(MPH)
SUR		CALM	2100	110	7.0
100		CALM	2200	130	7.0
200		CALM	2300	150	6.0
300	090	1.0	2400	115	7.0
400		CALM	2500	125	5.0
500		CALM	2600	120	7.0
600		CALM	2700	125	6.0
700	060	1.0	2800	120	6.0
800	070	1.0	2900	120	7.0
900		CALM	3000	155	8.0
1000	135	1.0	3100	130	9.0
1100	130	1.0	3200	130	10.0
1200		CALM	3300	130	10.0
1300		CALM	3400	135	8.0
1400		CALM	3500	130	8.0
1500		CALM	3600	140	7.0
1600	140	3.0	3700	130	8.0
1700	115	3.0	3800	125	8.0
1800	115	7.0	3900	135	8.0
1900	125	7.0	4000	130	9.0
2000	115	4.0	4100	140	10.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-33, AT 1408 MDT/30 SEPTEMBER 1976
12814A LANCE, MISSILE NO. 2714, ROUND NO. 288 AST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 486,302.67 Y = 185,283.13 Z = 3,989.47

APPROXIMATELY: 1/8 MILE SOUTH OF LAUNCHER.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	130	9.0
4300	130	7.0
4400	125	7.0
4500	115	6.0
4600	100	12.0
4700	115	11.0
4800	120	7.0
4900	125	8.0
5000	125	4.0
5100	130	4.0
5200	135	4.0
5300	140	3.0
5400	130	3.0
5500	130	2.0
5600	150	4.0
5700	160	3.0
5800	100	3.0
. 5900	110	3.0
6000	120	3.0
6100	100	4.0
6200	100	3.0
6300	140	3.0
6400	140	4.0
6500	125	5.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
6600	135	6.0
6700	130	7.0
6800	130	6.0
6900	125	7.0
7000	120	8.0
7100	130	7.0
7200	130	7.0
7300	120	7.0
7400	130	8.0
7500	130	10.0
7600	125	12.0
7700	125	13.0
7800	130	16.0
7900	135	15.0
8000	135	
8100	130	
8200	130	
8300	140	15.0
8400	140	13.0
8500	135	15.0
8600	135	13.0
. 8700	135	12.0
8800	135	8.0
8900	140	9.0

TABLE IV. (CONT)

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
9000	150	13.0
9100	155	20.0
9200	160	15.0
9300	165	
9400	165	
9500	160	
9600	160	15.0
9700	150	14.0
9800	145	13.0
9900	135	10.0
10000	140	9.0
10100	145	11.0
10200	135	9.0
10300	145	10.0
10400	140	8.0
10500	145	8.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
10600	130	7.0
10700	140	9.0
10800	145	10.0
10900	145	9.0
11000	140	10.0
11100	135	8.0
11200	135	10.0
11300	135	9.0
11400	120	6.0
11500	115	7.0
11600	125	6.0
11700	125	4.0
11800	120	10.0
11900	135	9.0
12000	135	9.0

TABLE IV. (CONT)

TATION	ALTITUDE 4	4051-00 FEET MSL
30 SEP.	16	

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A		
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<u>—</u>	3	
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H	2	JALL
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9		
H		
S		

TABLE V

WSTM SITE COORDINATES 450491.60 FEET E 464023.33 FEET N

PRESSURE	GEO ME TRIC	TEMPE	ERATURE	REL . 4U
	AL TITUDE	AIR	DEWPOINT	
MIL. IBARS	MSL FEET	DEGREES	S CENTIBRADE	

RESSURE	GEO METRIC	TEMPERATURE	ATURE	REL . JUM.
	AL TITUDE	AIR	EWPOINT	PERCENT
L. IBARS	MSL FEET	DEGREES C	CENTIBRADE	

PERCEN	8	24.0	=	5.	M	0	ن	1.	8	.6	8	.6	6	9	5	:	-													
CENTISRADE	14.0			•	•	3	15.		15.	26.	27.	3.	35.	36.	2.	45	ຄ													
DEGREES	5	22.4	1.		-						-	-	17.	19.	.9	31.	35.	39.	42.	•	48.	2.	53.		65.	. 9	72.	70.	2.	71.
ALTITUDE S MSL FEET	051.	4634.2	990	842.	738.	0451.	2245.	4021.	5404.	9371.	0153.	2903.	4309.	4 976.	7723.	792.	1785.	4777.	5912.	9610.	9104.	0757.	1515.	6 048.	6706.	7801.	0466.	· 6 6 0	2627.	3159.
IL. IBAR	80.	863.0	50.	27.	61.	.00	55.	13.	82.	.00	85.	35.	11.	.00	57.	27.	.00	63.	20.	21.	16.	.00	93.	55.	50.	42.	24.	21.	11.	08.

STATION ALTITUDE 4051.00 FEET MSL 1240 HRS MDT 293 ASCENSION NO. 30 SEP. 76

CATA SIGNIFICANT LEVEL 2740070293

TABLE V (CONT)

JALLEN

450491.60 FEET E 464023.05 FEET N WSTM SITE COORDINATES

> REL.HUM. PERCENT AIR DEWPOINT DEGREES CENTIGRADE TEMPERATURE PRESSURE GED METRIC ALTITUDE MIL_IBARS MSL FEET

-72.3 -71.3 -69.9 -69.4 -56.1 -62.3 -56.3 -46.3 -63.3 -72.3 -49.F 54656.9 88418.3 55451.2 55 929.5 57834.0 61726.9 65582.6 68685.2 79571.8 58547.4 60335.1 63234.3 100.0 30.0 20.0 19.5 889.0 885.0 882.0 775.0 70.0 55.0 104.C 50.0

46.4

88975.0

9

E COORDINATE	491.60 FEET	UZ 3 • U3 PEET	XPCNI	DE	REFRACTION	000	.00028	1.000269	.00025	.00025	.00025	.00024	.00024	.0002	.00024	.00024	•00024	.00023	.00023	.00023	.00023	.00023	•00022	.00022	•00022	.00022	.00022	.00021	.00021	.00021	.00021	.00021	• C0021	.00021	02000
H	450	٥	TA	SPFE	KNOTS	3.1																	2.4	2.8	•	•	•	•	•	•	•	•	•	•	•
			AC CNTH	IRECTION	DEGREESTAN	190.0																	m	235.1	32.	M	26.	18.	08.	94.	76.	55.	ŤŮ.	32.	26.
DATA 93		ı	L	SOUND	N	~	74.	•	7.1	70.	.69	9	89	67.	99	99	65.	65.	64.	. 50	63.	63.	62.	29	£1.	0.9	60.	59.	59.	58.	58.	57.	57.	20.	56.
R AIR	LLE	TABLE VI	FNSITY	/ CUBIC	METER	019	018.	1016.4	014.	.600	.400	99.	94.	.68	85.	.61	74.	.8	53.	. 8	52.	7.	12.	28	31.	. 2	21.	2	0	35.	00	95.	.00	35	8
ם			11	ENT		8			5			;	. 4		;	-		3.	3	3.	2.	2.	2.	2.	2	2.	-	:	-	:	-	-	ċ	ċ	
TYSE			FRATUR	DEWPOIN	CENTIGRADE	14.0	•			9.	•2	2	•	•		•	•		•	•		•	•				•	•	•	•	9.6-		0	÷	•
4051.00 FEET	1240 HRS MDT		1540	A IR	DEGREES	25.8	24.9	23.8	•		21 •6	21.1		9	9		18.1	1.	1:	16.9	•		2	15.1		14.1	3	3.		12.3	11.9	11.4	-		10.1
TITUDE		. Z . 20 .	PRESSURE		MILL IBARS	980.7	875.1	870.1	864.0	858.0	852.0	846.0	840.0	834.1	828.2	822.4	816.5	810.7	805.0	199.2	793.4	187.7	782.0	176.3	1.011	165.2	S.	754.1		743.3	3		2	122.0	_
TATION	30 SEP. 76	SCENSTON	S EDMETRI C	A TITUDE	MSL FEET	4051.0	4200.0	0	4500.0	9.008 P	50000	2.0022	5400.0	5600.0	5800.0	0.0009	6200.0	6400.0	0.0099	5800°C	7000-0	7200°C	7400.0	7600.0	7800.0	8000.0	8200.0	8400.0	3.0098	8800,0	0.0006	9200.0	0.0046	9500.0	9800.0
																1/	1																		

WIND DATA INVA, ID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES. ×

STATION AL 30 SEP. 76 ASCENSION	ALTITUDE 4051.CC FEET 75 N NO. 293	51.CC FEET 1240 HRS MDT	ET MS L OT		UPPER AIR DAI 2740030293 JALLEN TABLE VI (CONT)	OATA 93 ONT)		WSTM SITE 4534 9640	E CCORDINATES 491.63 FEET E 023.05 FEET N	
GEOMETRIC	PRESSURE	TEMP	TEMPERATURE	REL.HUM.	ENSITY	SPEED OF	AU ONI W	7.	INDEX	
LTITUD		AIR		ERCENT	CUSIC	SOUND	IRECTION	SPEE	0.5	
MSL FEET	MILLIBARS	DEGREES	CENT IGRADE		METER	KNOTS	DEGREES (TN)	KNOTS	REFRACTION	
10000.3	711.5	9.6	-12.0	20.4	1	5	123.0	5.5	.0002	
0200	106.4	9.2			70.	655.	CV	•	.00020	
400	701.3	8 - 7			65.	65	19	•	.00023	
0090	•	8•3	-13.3	0.07	•	654.0	117.7	7.1	002	
10800,0	691.	8 • 0	-13.6		55.	S	-		.00023	
11000.0	9	7.7	-13.8		50	R.	12.	•	.00019	
11200.0	089	7.3	-14.1		:	52.	. 80	•	.00019	
11400-0	675.8	7.0	-14.4		3.9	۵	. 40	6.5	.00019	
11600.0	670	9 9	•		34	652.	.00	•	.00019	
11800.0	9	6.3			29	651.	01	•	.00019	
12000,0		5 • 9			24	65	0.50		•00019	
2200	656.1	5.6			19	£50.	10.	5.1	.0001	
2400	651.2	5 -1		19.7	13	650	16.	4.7	.00019	
12600.0	6.6.4	5.3	-16.2	19.4	07.		123.1	4.5	.00018	
2800	641.6	2.5		19.1	02.	650.	29.	4.3	.00019	
3000	636.8	5.1	9	18.7	96	650	35.	4.3	.00018	
3200	632.1	5.0	•	18.4	90.	65	42.	4.3	.00018	
3400	627.4	4.9	-	18.0	85	649	48.	4.3	.00018	
13600.0	622.7	8.8	-17.6	17.7	-	649	46.	3.6	.00018	
3800	00	•		17.4	-	649	38.	2.8	.00018	
4000	F	4.6		17.0	68	649	24	2.0	.00017	
4200	6.809	4.3		17.1	63.	.64	4	1.4	.00017	
4400	5	0.4		17.3	58.	48.	5.	1.4	.00017	
4500	599.A	3.7	-18-7	17.4	54.	48.	.6	1.6	.00017	
.00	595.	3.4	-18.9	17.6	48.	648.2	-	1.8	.00017	
5000	90	3.1	6	17.7	:	:	19.	2.2	.00017	
200-	8	2.8		17.9	39.	47.	26.	5.6	.000	
5400.	82	5.5	-19.4	18.0	35.	47.	34.	3.8	.00017	
0	-	2.1	9.	18.0	M	9.949	138.9	5.1	2000	
5300	573.3	1.5		18.1	26.	46.	41.	6.3	.00013	

E COORDINATES 491.60 FEET E 323.05 FEET N	INDEX OF REFRACTION	016	. 3001	00016	.00015	.00015	.00015	-00015	.00015	015	.00015	.00014	.00014	, 1000.	.00014	.00014	*1000	.00014	.00013	.00013	.00013
WSTM STT	SPEED KNOTS	7.6		• •		•		•			•		•	• •	•	•	•	• •		•	•
	WIND DA CIRECTION DEGREESCTNI	143.1	45	43	35.	19.	. 60	90	99.	860	15.		84.	86.	87.	87.	70	74.	71.	71.	73.
SATA 93 ONT)	SPEED OF SOUND KNOTS		T T	42	42	-	10	39	3 0	637.9	36	36	36	2 60	34	34	200	32	31	30	30
UPPER AIR SATA 2740376293 JALLEN TABLE VI (CONT)	DENSITY GM/CUBIC	721.9	-60	000	96.	88	80.	76.	68.	64.	56.	52.	42.	33.	30.	26.	.77	15	12.	.80	05.
,	REL.HUM. PERCENT	18.2			8 8					18.9	6	n 60		, œ	8		• a	. 8			
T yst DT	FRATURE DEWPOINT CENTIGRADE	-20.4	21.	22		23.	23.	24.	24.	-25.2	25.	26.	26.	27.	27.	28.	29.		29.		
4051.00 FEET 1240 HRS MDT 3	TEMP AIR DEGREES	1:1	7.5.	• •	-1.5 -2.0	20		-3.8		-5.2	50	6 6 6 1	9 9 9	, -	-	80 0	0 0	-10.0	0	-11-1	-11.7
TITUDE 405	PRESSURE MILL IBARS	6.59	555-0	-	39	35	27	22	15	110	03	95	91	8	80	76	0.214	65	61	8	4.54.4
STATION AL 3C SEP. 76 ASCENSION	3 EOMETRI C ALTITUDE MSL FEET	16000.0	16500-0	7000	7200.	7600.	8000	18200.	8600.	8800°	9200	9600.	9800	0200	0400	0000	1000	1200	1400.	1600.	1800.

E COORDINATES 491.60 FEET E 023.05 FEET N	INDEX OF REFRACTION	00013 00013 00013	.00013 .00013 .00013	.00012	.00012 .00012 .00012 .00012 .00012	1.000121 1.000120 1.000119 1.000119 1.000119	.00011 .00011 .00011 .00011
WSTM SIT	SPEED KROTS	6.9	~ & & & Q	5000	10.8 10.6 10.3 10.3	0 0 0 0 0 0 0 V	7.52
	WIND DA CIRECTION DEGREES(IN)	75.	900.	13.	223.	227.8 228.1 228.5 228.2 227.7	26.
DATA 93 NT)	SECND KNOTS	28.	2222	2222	2223	619.2 619.2 617.9 617.3 616.7	13.
UPPER AIR DAT 274GD3D293 JALLEN TABLE VI (CONT)	DENSITY S GM/CUBIC METER	98.	888 888 80	72. 72. 68.	57.	5340 5340 5340 5240 5240 5240	17. 111. 01.
	RERCENT		_				
ET YSL MDT	PERATURE DEMPOINT CENTIGRADE						
4051.00 FEET 1240 HRS MDT 3	AIP DEGREES		1113			-20.5 -21.1 -21.5 -22.1 -22.5	23.
TITUDE 409	MILL IBARS	50.			N 50 40 50 10 10		370.9 364.9 364.8 358.8
STATION 4- 30 SEP. 76 ASCENSION	SEOMETRIC ALTITUDE MSL FEET	22000.	2800. 3000. 3200.	3600.	4 600. 4 800. 5 000. 5 2 0 0.	000000	6800. 7000. 7200. 7400. 7800.

453491.63 FCET E SITE COORDINATES

MSTR

PPER AIR JATA

464023.05 FEET

GEOMETRIC	FRESSURE		TEMPERATURE	REL . HUM.	DENSITY	SPEED OF	KIND CATA	TA	INDEX
AL TI TUDE		AIR	DE WP O INT	PERCENT	GM/CUBIC	S DU ND	DIRECTION	SPEED	96
MSL FEET	MILLIBARS	DEGREES	CENT IGRADE		METER	KNOTS	CEGREES (TN)	KNDTS	REFRACTION
28000.0		-26.1	-43.1	19.3	498.7	511.6	234.4	7.4	1.000112
28200.0	349.9	-27.2	-43.5	19.5	495.5		236.8	7.8	1.000111
28400.0	346.9	-27.7	-43.8	19.7	492.3	610.4	239.0	8.2	1.000110
28600.0	344.0	-28.2	-44.1	19.8	489.1	509.8	240.9	8.5	1.000110
28800.0	341.1	-28.7	-44.5	20.02	J. 98 P		242.8	8 . 0	1.000109
29000.0		-29.5	-44.3	20.2	482.9		243.7	9.3	1.000138
29200.0		-29.7	-45.2	20.4	479.8	£07.9	243.3	9.6	1.000108
29400.0	332.5	-30.5	-45.5	20.5	476.7	607.2	243.0	10.0	100001
29600.0		-30.7	-45.9	20.8	473.7	8.903	242.6	10.3	1.000106
29800.0		-31.2	-46.2	21.0	470.7	606.0	242.3	10.6	1.000135
300000	324.1	-31.E	9.94-	21.0	467.4	605.5	241.9	11.4	1.000105
30200.0		-32.1	-46.9	21.0	464.2	604.9	241.4	12.8	1.000134
			1						

. 000003 2600000 .00000 1.000091 43.0 9.04 47.1 243.2 242.7 242.1 597.6 597.9 598.3 597.2 416.4 110.1 9.7** 11.1** 8 . 3 * * -61.1 - 58 .C -59.5 -56.7 -37 .3 -37.6 -37.9 279.4 81.3 33200,0 3400.0 33600.0 33800.0

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE

WAS USED IN THE INTERPOLATION.

1.000133

14.2 17.D

240.5

603.9

457.8

161 .C

21.0

21.0

321.3 318.5 315.8 313.1 310.4 307.7

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308000

31000.0 31200-0 31400.0 31600.0 31800,0 32000.0 32200-0 32400.0 32600.0

\$05 00° C

E03.3

54.7 51.5

21.0 21.0

3.84 -

-47.3

-32.5 -33.3 6 C2 . 8 EC2.3

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240.3 240.4 240.5

1.000102

101000-1

..000100 001000-1 6600000*1

19.9

21 .3

22.8

240.6

240.7 240.7

600.7 600.3

439.3

601.2

601.7

195.4 442.4

21.0 21.0

- 49.5

-35.0

302.4

305.0

-35.7

297.2

299.9

-48.9

-49.1

-48.8

48.4

-33.7 -34.2 -34.6

21.0

26.2

28.6 31.3

240.8

240.7

600.0 599.6

432.5

436 .C

19.5** 8 - 1 * * 6.7** 5.3** 3.9**

-51.3 - 50.7

-52.5

-36 .2 -36.5

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-36 •0

- 53 . 4 -54.5 - 55 . 5

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429.3

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599.3 598.6

> 422.8 419.6

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-37.1

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35.8

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.00009

\$6000J*

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240.8

+ 60000 ·

401000-1 1.000103

UFFER AIR DATA	2740030293	JALLEN	TABLE VI (CONT)
	STATION ALTITUDE 4051.00 FEET MSL	30 SEP. 76 1240 HRS MDT	ASCENSION NO. 293

WSIM SITE COUNDINATES 450491-60 FEET E	464023.05 FEET N	INDEX	0.6	METER KNOTA DEGREEATIN KNOTA REFRACTION
S to MISM	9 5	TA	SPEED	KNOTO
		MIND DATA	CIRECTION SPEED	DEG REF ST TNI
33	ONT)	SPEED OF	S.DUND	KNOTO
274UD3UZ93 JALLEN	TABLE VI (CONT)	REL.HUM. DENSITY SPEED OF	GM/ CUBIC	METER
		REL.HUM.	PERCENT	
DT MSL		TEMPERATURE	DEWPOINT PERCENT GM/CUBIC SOUND	FEET MILL TRARY DEGDEFS CENTION 10:
1240 HRS MDT		TEM	AIR	DEGDEFS
11100= 40	NO. 293	ETRI C PRESSURE		MILL TABR
EP. 76	NOIN NO.	ETRI C	TUDE	FFFT

INDEX OF REFRACTION	1.000033	000	90000	• 00000	.0000	• 00000	.0000	• 00000	0000	.0000	*0000	.0000	0000	. 30000	.0000	.00003	• DOOC 8	.00007	1 2000-	100	.0000	.00007	.0000	10000	2000.	.00007	.0000	00	.0000
TA SPEED KNOTS	47.7	8	9	9.	•			~	-	9	9	•	9	5	5		3	3	3		:	5	•	8	•	3	5		9
WIND DA DIRECTION DEGREESTIN)	243.7	7			3	4 4	44.	3	2	45.	46.	47.	48.	50.	51.	53.	55.	57.	58.	258.5	58.	59.	59.	58.	58.	57.	56.	5	55
PEED OF S.DUNC KNOTS	596.9	96	95.	95.	94	. 46	93.	92.	92.	91.	90.	89.	89.	88.	87.	37.	86.	85.	84.	584.2	63.	82.	82.	82.	63.	83.	82.	82.	81.
DENSITY S GM/CUBIC METER	403.03	97.	94.	91.	8	85.	84.	81.	-	76.	74.	71.	69	66.	64.	61.	59.	56.	54.	52.	6.0	17.	45.	41.	37.	34.	31.	2	26.
RERCENT	5.5**	• 6	•																										
ERATURE DEWPOINT CENTIGRADE		9	3																										
TEMPI AIR DEGREES	138.4	-39.E	-39.3	-39.6	-40.1	-40.5	-41.1	-41.7	-42.2	-42.7	-43.3	-43.9	-44.4	-45.0	-45.5	-45.1	-46.6	-47.2	-47.7	-48.3	-48.9	4.6 p-	-50.0	-49.5	-49.1	0.64-	-48.4	6.64-	-50.3
PRESSURE MILLIBARS	272.1	67	5.5	52.	9	58.	55.	53.	51.	.61	.94	41	42.	50	37.	35.	33.	31.	29.	27.	25.	23.	21.	19.	17.	15.	13.	11.	.60
3 EOMETRI C ALTITUDE MSL FEET	34200-0	4400.	4500.	4800.	5000.	5200.	5400.	5500.	5800.	6000.	6200.	6400.	6600.	6800.	7000	7200.	7400.	7600.	7800.	8000	8200.	8400.	8600.	8800.	.0006	9200.	9400.	9600.	-0086

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

E CCORDINATES 491.53 FEET E 1023.05 FEET N	INDEX OF REFRACTION	.0000	0000	70000	.00007	-000C	.00000	30000·	.00000	0000	.00005	900000	.00005	90000	.00003	30000	.00005	90000	.00000	30000°	.00000	.00003	90000	.00000	900000	.00005	900000	.00000	.00005	.00000
WSTM SIT	SPEED KNOTS	61.3	•	65.7				70.3	-	72.8	74.2	5	-	8	9	19.9	9.	9	9	9	9	8	-	9	9	5	5	•	74.5	
	WIND CA DIRECTION CEGREES(TN)	55	255.6	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55.	55	56	56	57	57.	58	58.	59	59.	e C•	61.
2292 2292 (CONT)	S OUND KN D T S	81.	•	8.676	78.	78.	78.	78.	11.	76.	16.	75.	74.	74.	73.	72.	72.	71.	70.	70.	69	58.	68.	67.	£6.	.95	65	24.	F3.	53.
PPER 4IR 3 2740C3C75 JALLEN TABLE VI (CC	DENSITY S GM/CU3IC METER	24.		17.	15.	12.	69	307.1	. 40	02.	00	98.	95.	93.	91.	89.	87.	85.	83.	81.	19.	17.	75.	73.	71.	69	67.	65.	63.	51.
	REL.HUM. PERCENT																													
1.00 FEET MSL 1240 HRS MDT	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	53.	51		-52.4	52.€			•	53.8	•	54.9		55.9	•	-56.9	57.4	58.0	58.5	59.0	59.5		.60.5	:	61.6	29	4		63.	54.2
ALTITUDE 4051.00 FEET 75 N NO. 293	PRESSURE MILLI3ARS DE	1.	205-3		0 10	.1	.9			3.		_	_	_			_	~		m	_	9.5	6			3	;	.6	158.4 -	6.9
STATION AL 30 SEP. 75 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	4 COOD. C	40200-0	מינות מינות	0800	1000.	1200.		1600.	1800.	2000-	2200.	42400.0	2600.	42800° 0	43000.0	3200	3400	3600.	3800.	4000	44200.0	0.00000	4600.	4800.	5000	45200.0	0 *00 h 5 h	45600.0	45800°C

SITE COORDINATES 450491.60 FEET E 464023.35 FEET N	INDEX OF REFRACTI	1.00005 3 1.00005 7 1.00005 C 1.00005	1.00005 1.00005 1.00005 1.00005		1.000004 1.000004 1.000004 1.000004 1.000004 1.000004 1.000004
N T T	₩ F M	11000	087951	8 2 2 8 7 5 8 A 6	22 M M M M A A A B A A A A A A A A A A A A
	C CND D	3 2 2 2 5	7 7 10 10 19		276.4 277.9 279.2 280.7 284.2 284.2 284.7 285.7 283.7 283.5
S DATA	S S S S S S S S S S S S S S S S S S S	51.	000000000000000000000000000000000000000	2 2 2 2 2 2 2 2 2 2 2 2	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
UPPER AIR D 274003029. JALLEN TABLE VI (CON	R R S S S S S S S S S S S S S S S S S S	55.00	3 4 4 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	72228 7228 7228 733 733 733 733 733 733 733 733 733 73	HOLMULRWHO
	REL.HUM. Percent				
51.00 FEET MSL 1240 HRS MOT	R E E	ນທູດທູດ		7	-71.0 -71.9 -72.4 -72.8 -70.8 -70.2 -70.4 -70.7
4051.00 F 1240 HRS	E & 4	: m m m m m			WOL = WOL = WO @
4_ TITUDE 76 N NO. ?	PRESS MILL IB		11446	- M M M M M M N	128. 127. 125. 125. 120. 119. 1118.
STATION 4. 30 SEP. 76 ASCENSION	ITUDE ITUDE FEET	6200, 6400, 6500.	7266. 7266. 7400. 7500.	# # # # # # # # # # # # # # # # # # #	49800.0 50000.0 50200.0 50400.0 50600.0 51200.0 51200.0 51400.0 51600.0

E COORDINATES 491.63 FEET E 323.35 FEET N	INDEX OF REFRACTION	#0000.	#0000.	#0000. #00000.	.00003 .00003 .00003 .00003	1.000036 1.000036 1.000035 1.000035 1.000034 1.000033 1.000033	
WSTM SIT	SPEED KNOTS	25.3		90000	19.7 16.3 14.6 112.9	100.5 100.5 100.6 110.0 110.0	4
	WIND DA CIRECTION DEGREES(IN)	79.	73.	773.	281.0 280.8 280.5 279.1 279.1		2
R 3ATA C293 (CONT)	PEED OF Sound Knots	53.	53.	52.	50 50 50 50 50 50		3
UPPER AIR 3 274CD3C25 JALLEN TABLE VI (CO	DENSITY S GM/CUBIC METER	98.	92. 90. 88.	84. 82. 81. 79.	65 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	W .	7
	REL.HUM. Percent						
ET MS L	PERATURE DEWPOINT CENTIGRADE						
4051.00 FEET 1240 HRS MDT	TEME AIR DEGREES	-71.5	-72.0	-71.9	-71.6 -71.9 -71.7 -72.0 -72.0	1711-1 1 1 1	1
TITUDE 408	PRESSURE MILL IBARS	3 m %	110	05. 04. 03.	1001. 1000. 1000.3 1000.3 1000.3 1000.3 1000.3	88899999999999999999999999999999999999	
STATION AL 30 SEP. 76 ASCENSION	SECMETRIC ALTITUDE MSL FEET	200	000000000000000000000000000000000000000			55800.0 56200.0 56400.0 56400.0 56600.0 57200.0 57400.0 57400.0	

E CCORDINATES 491.63 FEET E 023.05 FEET N	INDEX CF REFRACTION	00003	.00003 .00003	00	-00002	.00002	.00002	.00002	.00002	.00002	-00002	0000	20000	00002	.00002	.00002	-00002	-00002	-00002	.00002
NSTM SITE 4534	SPEED KNOTS			• •	• •		9.6					8	•	9.9		•	•	4.5		•
	WIND DA JIRECTION DEGREES(IN)	219.9	26.	231.2	36.	42	47.	49	25	256.2 262.0	68	80	85.	94.	00	308.3	17.	2	25.	29.
) A I A ? 9 3 (CONT)	SPEED OF SOUND KNOTS	20 20	550	560.	560.	561.	561.	561.	562.	ניו ניו	5 5	564.	564	555	565.	26	165.	. 59	9	567.1
UPPER AIR 274CO3C? JALLEN TABLE VI (0	DENSITY GM/CUBIC METER	m =	137.6	3 M	20	29	125.8	24	21	13	17	14	13	117	C 9	9	07	105.4	05.	
_	REL.HUM. PERCENT																			
ET MS L	EMPERATURE P. DEWPOINT SES CENTIGRADE																			
5 1. 00 FEET 1240 HRS MDT	TEMI AIR Degrees	68.	1 666.1	999	50	-55.8	-65.7	5	: :	M		63	-63.0	62.	2.	-62.5	5	52.	-	-61.2
ALTITUDE 4051.00 FEET 75 N NO. 293	PRESSURE MILLIBARS		8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		78.6	77.0	75.5	74.0	72.5	71.9	69.1	69.1	B C C	67.1	66.4	6.5.8	S		m I	m
STATION AL 30 SEP. 75 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	8000. 8200.	58400.0 58600.0 58800.0	000	0, 0,	5 0	00	0 6	, ,			~	\sim $^{\circ}$	S	2	m	m	m	M	m

NATES EET E	NO I	0023	00022	AI A	101	NA	N	N	NN	2	~	H -	4 1	-	н.	4 1	- ۱	4 1	-	_	-	-	2100	-
E COORDIN 491.60 FE 023.05 FE	INDEX OF REFRACTI	1.000	0.0	0.0		0,0		-	9 9		-	9 0		-	9	•	•		0	-	0	-	0	
MSTM SITE 4504 4640	TA SPEED KNOTS	3.1		1.5	6			•	6 · 8		•	•	• •		•	•	•	• •	•	•	•	•	3.7	
	WIND DA CIRECTION DEGREES(TN)			41	12.	82.	47.	45.	8 S	43	43.	45	6.5	50.	52.	200	51.	, a	46.	43.	40.	37.	34	30.
293 (CONT)	SPEED OF SOUND KNOTS	568.2	69.	69.	0	71.	7.1.	72.	572.1	72.	72.	72.	72.	73.	73.	13.	13.	7 7	73.	73.	74.	74.	74.	514.5
UPPER AIR 1274003C29 JALLEN TABLE VI (C	DENSITY GM/CUBIC METER	102.8	0 0			3	2 5	•	-:	5		-		:	·			: :	6	.6	8		9	
	REL.HUM.																							
ET MSL RS MDT	DEMPOINT CENTIGRADE																							
1.00 FEET 1240 HRS	TEMP AIR DESREES	-60.4	-60.1	6	-58 -5	-58.1	57.	•	-57.5	57.	•		56.	-55 •8	.0	. 00	200	56.	9	-55.1	-95	5	55	5
A_TITUDE 4051.00 FEET 76 N NO. 233	PRESSURE MILL I3ARS	62.6 62.0	60.8		59.1	58.5	57.4	55 • 9	56.3	55.2	54.7	54.2	53.2	52.1	52.2	51.1	51.2	50.2	49.7	49.3	48.8	48.4	47.9	
STATION A. 30 SEP. 76 ASCENSION	SEOMETRIC ALTITUDE MSL FEET	64200.0	64600.0	64800.0	65200°C	65400.0	65800.	660000.	66200.0	66600.0	66800, 0	67000.0	67400.0	67500.0	67800-0	68000.0	0.00289	68600.0	68800.0	69000.0	69200.0	69400°C	6.00969	9800
	A CONTRACTOR OF THE PARTY OF TH							20																

CTATTON	10F	BOST AND FRET WAL	10.5
10.41	1	3	
30 SEP.	76	1240 HRS	MOT
A SCENSION NO.	N NO. 293		

UPPER AIR DATA 2740030293 JALLEN

TABLE VI (CONT)

WSTM SITE COORDINATES 450491.60 FEET E 464023.03 FEET N

XECNI	OF REFRACTION
1 TA	SPEED
MIND DATA	CIRECTION SPEED DEGREES(IN) KNOTS
SPEED OF	
DENSITY	GM/CUBIC METER
REL.HUM.	PERCENT
PERATURE REL-HUM. DENSITY SPEED OF	DEWPOINT PERCENT GM/CUBIC SCUND CENTIGRADE METER KNOTS
TEMP	AIR DEGREES
PRESSURE	MILL I3ARS
SEOMETRI C PRESSURE	ALTITUDE AIR MSL FEET MILLIBARS DEGREES

XECNI	DF	REFRACTION	1.000017	1.000011	.00001	•	.00001	.00001	0000	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.00001	.0000	.0000	.00001	.00001	.00000	.0000	.00001	.00001	.00001	.0000	.00001	.00001
TA	SPEED	NOT	2.6	2.1	1.6	1.3	1.1	1.3	1.9	2.5	3.2	3.9	4.3	4.7	5.1	5.5	5.9	6.3	9•9	6.8	6.9	7.1	7.3	7.4	7.6	7.7	7.7	7.8	7.9	8 • 0	8 • 1	8.1
AC CNI	IRECTIO	REE SI	24.	215.5	01.	80.	46.	12.	m	3	-	3.	2.	2.	2.	-	1.	-	-	0	8	-	•	5	4.	5	9		9		÷	2.
LI LI	SCUN	ON	574.8	14.	75	75.	75.	75.	~	75.	.94	76.	76.	76.	75.	76.	77.	517.2	17.	77.	17.	77.	78.	78.	78.	78.	78.	78.	79.	19.	79.	79.
ENSITY	/ CUBIC	METER	75.2	74.5	•	•	•	-		0	6		œ	-	2	9		64.8		3	2.	2	-	1.		9	6	8	8			\$
<u>.</u>	PERCENT																															
ERATUR	EWPOINT	116																														
TENP	IR	DEGREES	5	-55.4	5.	55.	5	-	5		54.	-	54.		4	3.	M	-53.6	3	3	3.	3	3	52.	2 .	52.	. 25	2.	2.	2	25	-
PRESSURE		MILL I3ARS	-	45.5	9	5		:				3.	2.	2.	2.		:	0	0	0		9.	9.	8		-	-	-	9	9	2	5
L	ITUDE	M	000	0200.0	.004	500.	900.	000	200-	400	600	300	.000	200.	400.	.009	800	.000	200.	400.	600.	.008	000	200.	400	.009	800.	.000	200.	400.	00	800.

ATION	ALTITUDE	STATION ALTITUDE 4051.00 FEET MSL	MSL
d a	76	1240 HRS MD	-

The second secon

UPPER AIR JATA 2740036293 JALLEN

TABLE VI (CONT)

WSTM SITE COORDINATES 453491.63 FEET E 464023.05 FEET N

INDEX OF REFRACTION	1.000012 1.000012 1.000012 1.000012 1.000012 1.000011 1.000011 1.000011 1.000011 1.000011 1.000010 1.000010 1.000010 1.000010 1.000010 1.000010 1.000010 1.000010 1.000010
ATA SPEED KNOTS	
WIND DA DIRECTION DEGREES(TN)	0.00 0.00
SPEED OF SOUND KNOTS	5880 5880 5880 5880 5880 5880 5881 5882 5882 5882 5883 5883 5883 5883 5883
DENSITY S GM/CU3IC METER	
REL.HUM. PERCENT	
EMPERATURE Dewpoint Es centigrade	
TEMP AIR DEGREES	
PRESSURE MILLIBARS	333 344 345 345 345 345 345 345 345 345
GEOMETRIC ALTITUDE MSL FEET	750000-0 76200-0 76200-0 76400-0 76400-0 77200

	IN ALTITUDE 4051.00 FEET MSL
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UPPER AIR DATA

E COORDINATES 491.63 FEET E 023.05 FEET N	INDEX OF REFRACTION		1.000009	1.000009	1.000000	1.0000009	1.000039	1.0000008	1.000038	1.000008	1.000038	1.000038	1.000008	1.000038	1.000008	1.000008	1.000008	00000	.0000	0000	.0000	0000	.000	0000	1.000007
WSTM SITE 4534 4640	ATA SPEED KNOTS	•	8 9	7.1	7.3	0.2	6.9	6.8	9.9	6.6	6 e	6.2	6.1	6.0	5.7	5.6	5.1	9 • 6		9.0		•	•		
	WIND DA DIRECTION DEGREES(TN)	5 4	30	142.2	000	1 .	-	147-1	2.	5	158.0	, -	M	5	169.2	-	.9		9	8	2	2	0		
93 ONT)	S OU NO KNOTS		583.9	584.0	584.2	- 5		584.6		584.9	5 5		2	585.4	2 10	5	2	585.8	2	586.0	•	586.2	586.3	586.4	586.5
2740030293 JALLEN TABLE VI (CONT)	DENSITY S GM/CUBIC METER	•	• •	40.5	•	, 01	8	æ ~	-		35.8		5	- 1	7 .		-	33.8	33.5	ň		2	32.2		31.6
	REL.HUM. PERCENT																								
T MSL	TEMPERATURE R DEWPOINT EES CENTIGRADE																								
4051.00 FEET 1240 HRS MDT 13	TEMF AIR DEGREES	2 8 4 5	-48.5	-48.4	-48.3	-48.1	0.84-	-47.9	9. 14-	-47.8	-47.7	-47.5	-47.5	17.4	-47.2	-47.2	-47.1	-47.0	-47.0	-46.9	-46.8	-46.7	-46.7		-46.5
ALTITUDE 40175 76 DN NO. 293	PRESSURE MILLIBARS	25.8	26.4	25.9	25.6	25.2	24.9	24.5	24.3	24.0	23.8	23.4	23.2	23.0	22.6	22.3	22.1	21.9	21.7	21.5	21.3		-	20.8	20.6
STATION AL 30 SEP. 76 ASCENSION	GEOMETRIC ALTITUDE MSL SEET	82000.0	82400.0	82600.0	83000.0	83400-0	83500.0		84200,0	84400.0	84500.0	85000.0	85200.0	85400.0	85800.0	86000-0	86200.0	86400.0	86500.0	86800.0	87000,0	87200.0	7400	7600.	87800.0
								23																	

WSTM SITE COORDINATES 450491.60 FEET E 464023.05 FEET N	INDEX 0F 0F 1.000007 1.000007 1.000007 1.000007
WSTM SITE 4504 4640	SPEED KNOTS
	MIND JATA CIRECTION S DEGREES(IN) K
OATA 33	SOUND KNOTS 586.6 586.7 586.7 586.7 586.7
UPPER AIR DATA 2740030293 JALLEN TABLE VI (CONT)	31.3 586.6 31.3 586.6 31.3 586.6 31.0 586.7 30.7 586.8 30.5 586.7
-	RERCENT
1.00 FEET MSL 1240 HRS MDT	PRESSURE TEMPERATURE AIR DENPOINT WILLIBARS DEGREES CENTIGRADE 20.4 -46.5 20.2 -46.3 19.8 -46.3 19.7 -46.4
051 •00 1240 I	DEGR DEGR 146
TITUDE 4	PRESSUR WILL IBAR: 20-2 200-2 19-8
STATION ALTITUDE 4051.00 FEET MSL 30 SEP. 76 1240 HRS MDT ASCENSION NO. 293	3EOMETRIC PRESSURE ALTITUDE MSL FEET MILLIBARS 88000.0 20.0 88200.0 20.0 88500.0 19.8

STATION ALTITUDE 4051.00 FEET MSL 30 SEP. 76 1240 HRS MDT ASCENSION NO. 293

MANDATORY LEVELS 2740030293 JALLEN

WSTM SITE COORDINATES 450491.60 FEET E 464023.05 FEET N

TABLE VII

WIND DATA DIRECTION SPEED DEGREES(IN) KNOTS	XX0.8888 0.8888 XX0.8888 0.8888	210.1 2.5		, 60	2	9	10.	7.	24.		99	255.5 79.9	7.	41						9	10.	•	
REL . 4UM. Percent	24.	22.	20.	18.	19.	19.	19.	19.	21.														
TEMPERATURE R DEWPOINT EES CENTIGRADE	-4.3	-13.1	-15.9	-21.9	-26.2	-31.3	-36.1	-43.4	-49.8														
AI	21.5	12.9 8.6	5.4	6.1	-6.5	5	-19.0	-27.2	-35-4	-42.5	-52.4	-58.3	-65.7	-72.2	-71.3	0-99-	-63.3	-59.1	-56.3	-53.3	-49.5	-48.1	-46.3
GEDPOTENTIAL FEET	5065.	8560.	12942.	881	19351.	22028	24942.	28152.	317 32.	35844.	4 06 71.	43471.	46594	50181.	54505.	58864.	61534.	•	w	73129.	19259.	83190.	88036.
PRESSURE GE	850.0	750.0	650.0	550.0	20000	4.50.0	400.0	350.0	300.0	250.0	20000	175.0	150.0	125.0	100.0	80.0	70.0	0.09	20.0	0.04	30.0	25.0	20.0

XX WIND DATA INVALID DUE TO MISSING RAW AZIMUTH AND ELEVATION ANGLES.

2	L	
FEET	MDT	
	HRS	
4 940 • 00	1340	
300		355
AL T	16	
STATEON	30 SEP. 76	TOUTON

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SIGNIFICANT LEVEL DATA 2740040225 STALLION

WSTM SITE COORDINATES 4C3783.00 FEET E 701403.00 FEET N

TABLE VIII

PRESSURE	GES ME TA IC	TEMPER	RATURE	REL . 1UN
	-	AIR	EWPD	PERCENT
MIL_ IBARS	MSL FEET	DESREES	CENTIBRADE	

RESSURE	ED ME TR	ME	ATUR	EL. 40
	ALTITUDE	AIR	DEWPDIN	PERCENT
IL. IBARS	ST FEE		ENTI	
52.	940.	4		8
850.0	5027.6	23.5	2.4	25.0
01.	683.	8	•	m
39.	922.	ė		3.
0.00	0418.	•	;	
9.08	1177.			0
62.2	915.		•	-
15.8	3863.		16.	9.
0.00	9322.	-	5	2
0.06	9840.		-52	-
46.0	2221.	3	ů	3
0.00	4 909 ·	.6	37.	
25.0	9848	2.	•	m
0.00	1683.	36.	49.	
63.2	4647.			
50.0	5791.	44.		
28.€	7801.	4 9.		
9.80	9708.	51.		
0.00	.4090	53.		
87.2	1998.			
50.0	6530.	.93		
31.4	9137.	:		
19.2	1024.	73.		
0.00	4429.	71.		
3.4	5508.	2.		
4.0	7847.	•		
0.0	1491.	99		
1.0	4 284.	.09		
0.0	8407.	1.		
0.	9189.	52.		

|--|

SIGNIFICANT LEVEL DATA 2740045225 STALLION

TABLE VIII (CONT)

REL.HUM. PERCENT

TEMPERATURE AIR DEWPCINT DEGREES CENTISRADE PRESSURE GEOMETRIC

ALTITUDE MIL_IBARS MSL FEET

-44.3 -48.3 -40.1 87937.5 10.0 103406.2 8.6 106839.1 90874.0 20°C 17.5

403783.00 FEET E WSTM SITE COORDINATES

	STATION ALTITUDE 4940.00 FFFT MSL	ALTITUDE 4
	mar 0411 0701	1

DATA

COORDINATES	03.00 FEET		INDEX	0F	REFRACTION	.00025	.00025	1.000250	.0002	.00024	-	.00023	m	.00023	N	.00022	.00021	.00021		.00023	.00019	.00019	-	.00018	-	.00017	.00017	.00017	.00015	.00016	.00015	.00015	.00015	1.000154	.00015
MSTM SITE	701		-		KNDTS	•	2.0			•	•	•	•	•	•	•	•	•	5.4		•	•	•	•	•	• 5	•	•	•	8 • 0	•	•	•	5.3	•
			H	IRECTIO	REES	ė	154 - 1	•	-		9		1.	3.	-		:	:	8		3.			2.	2	9		:	2.	2.		7.	8		9
2			٥	SOUN	KNOTS		2	670-3			-		ċ			:			652.7	•			÷	ċ		648.4	647.1	645.7	644.4	M	•	640.4		-	
274004C22 STALLION		TABLE IX	ENSIT	SIC	2	6	94	983.7	72	09	48	937.4	926.2	915.0	903.8	891.3	878.9	866.1	850.2	836.9	824.6	808.7	795.1	7.087	767.3	755.9	744.6	733.6	722.7	712.0	•			6.078	60.
			REL . HUM.	PERCENT		23.0	24.4	27.3		72.1			38.9	-	43.1	•		•	33.3	•						19.3						21.0		21.5	
T MSL	1		EMPERATURE	H	CENT IGRADE	•	•	2.2	•	1.1	•	••	1	6	-1.7	-2.1	-3.7	6.4-	-8-0	-9.8	-10.1	2	3	-15.3	-16.9	-17.6	œ	-19.2	-19.9		-21.5	-22.3	3	-23.9	:
1340 HRS			TEMP	AIR	DEGREES	24.5	. 23.8	21.9	20.3	18.5	9	2.	13.6	11.9	10.3	9.1	7.9	6 • 9		6 • 3	5.3	5.2	5.1	5.1	4.7	3.6	2.5	1.3	•5		-2.0	-3.1	-4-2	-5.4	-6.5
ALTITUDE 4940.CC FEET M. 1340 HRS MDT	NO. 225		PRESSURE		MILLIBARS	852.6	850.8	836.0	821.3	807.0	792.7	178.5	764.6	750.9	737.5	724.0	710.8	697.9	685.1	672.5	660.1	6-11-9	6329	624.2	612.6	601.C	589.7	578.5	567.6	556.9	545.3	536.0	525.9	515.9	2.905
STATION AL	$\overline{}$		GEOMETRIC	AL TITUDE	MSL FEET	9990.0	5000	5500.0	0.0003	6500,0	7000-0	7500.0	8000.0	8500,0	0.0006	9500, 0	10000.0	10500,0	11000.0	11500-0	12000.0	12500.0	13000.0	13500-0	14000.0	14500-0	15000,0	15500.0	16000,0	16500.0	17000.0	17500.0	18000-0	18500.0	19000.0
U1 F1	-		9	-	•												28																		

	UPPER AIR DATA	
STATION ALTITUDE 4940.00 FEET MSL	2740340225	WSTM SITE COOR
30 SEP. 76 1340 HRS MDT	STALLION	403783.00
ASCENSION NO. 225	TABLE IX (CONT)	721 4 03 - 00

E COORDINATES 783.00 FEET E 403.00 FEET N	INDEX OF REFRACTION	1.000149	.00014		.00013	.00013	.00013	.00012	.00012	.00012	.00012	.00012	.00011	11000-	11000	.00011	.00010	.00013	.00010	.00010	.00010	• 00000	•00000	• 00000	600000	60000	•00000
FOR FOR	TA SPEED KNOTS	3.5				-	8	•	3	•	:	2.	•	2			•	-	3	9		-	5	:	•	0	•
	WIND DA CIRECTION DEGREES(TN)	147.8	98	207.8	17.	22.	26	25.	25.	26	30.	33.	35.	38.	7 4	249.5	5	5	55.	2	57.	255.1	53.	52.	51.	249.5	8
! 5 ONT)	S DUNC KNOTS	635.5	33.	m a	28.	56.	22	22.	21	19.	18.	16.	= !	13	610-0	8	£06.8	05.	C		0	0		6	•	95	94.
274C34D225 STALLIDN TABLE IX (CONT)	DENSITY S GM/CUBIC METER	650.1	29.	2 -	02.	93.	84.	66.	57	48.	39.	31.	23.		5 6	6	83.	9	8	0	2.	444.5	9	•			:
	REL.HUM.	21.7		22.0	22.8	22.7	22.1		20.5	20.1			•	21.3		22-2		22.8	23.1	•		23.9		17.4.	13.4.	9.3**	5.2**
T MSL	TEMPERATURE RES DENPOINT EES CENTIGNADE	-25.4	27.	-28-0	36.	•	- 32 - 4	34.	-36-0	-31.2	-38-1	-39.1	-40-1	7 ;	-43-1		-45.1		-47.0	-47.8	-48.6	-49.3	-51.0	-53.4		9	-64.5
4940.00 FEET MSL 1340 HRS NDT 5	TEMP AIR DEGREES	-7.2	9.	-10.5	-13.3	-14.5	-15.6			-20-1	-21.4	-22-1	-24.1	1.25	-28.0	-29.3	-30.6	-31.9	-33.1	-34 -1	-35.1	-36 •1	-37.0	-37.7	œ	-39.2	-39.9
TITUDE NO. 22	PRESSURE MILL IBARS	496.6	11	5.88.1	49		E	415.0	1.901	398.5	390.2	382.1	374.1	366.3	351.3	344.0	336.8	329.8	322.9	315.9	309.1	302.5	295.9	289.4	283.1	276.9	270.8
STATION AL 30 SEP. 76 ASCENSION	GEOMETRI C ALTITUDE MSL FEET	19500-0	20500.0	21500.0	22000-0	22500.0	23000-0	24000	24500	25000.0	25500.0	26000-0	26500, 0	27500.0	28000-0	28500.0	29000-0	29500,0	300000	30500.0	31000.0	31500.0	32000.0	32500.0	33000.0	3500.	34000,0
								100	29																		

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

NWZ							
COORDINATE 83.03 FEET 63.00 FEET	INDEX OF REFRACTION	1.000087	0000	1.000075 1.000075 1.000075	1.000071 1.000071 1.000070 1.000068	1.000054 1.000052 1.000051 1.000061	1.000054 1.000056 1.000055 1.000054 1.000053 1.000053
WSTM SITE 4037 7014	ATA SPEED KNOTS	43.6	NNM	5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	63.3 70.9 73.2 74.8	76-77 79-18 80-00 79-18	76.2 73.1 69.7 65.5 61.4 57.1
	WIND DA DIRECTION CEGREES(TN)	247.8	50.	5 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		255555	260.9 262.8 264.8 266.4 270.8
25 25 ONT)	S DU ND S DU ND K N D T S	594.0			00 ~ 10 10 0	N = 0 0 0 F	554.5 554.5 554.6 554.3 554.3 554.5
UPPER AIR JAIR 274004C225 STALLION TABLE IX (CONT)	DENSITY GM/CUBIC METER		377.5 371.3 365.2 359.3			288.9 288.9 278.5 278.2 278.2 267.9	258 1 258 1 258 2 2 2 3 3 3 3 2 2 3 3 3 3 3 3 3 3 3 3
3	REL.HUM. PERCENT	1.2.					
er mst. Or	TEMPERATURE R DEWOOINT EES CENTIGRADE	-75-1					
1340 HRS 1	TEMF AIR DEGREES	-40.7	144.6	50.	155.0	666566	1 1 6 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
ALTITUDE 4940.CC FEET 75 1340 HRS MDT N NO. 225	PRESSURE MILLIBARS	259.1	247.6 242.0 236.5 231.2		205.8 201.0 195.3 191.7	178.3 174.0 169.8 165.7	153.9 150.2 146.5 142.8 139.2 135.7
STATION AL 30 SEP. 75 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	500.	36000.0 36500.0 37000.0	5000	40000.0 41000.0 41500.0	# # # # # # # # # # # # # # # # # # #	4650000 470000 4750000 4850000

AT LEAST ONE ASSUMED RELATIVE MUMIDITY VALUE WAS USED IN THE INTERPOLATION.

TITUDE 4945.CD FEET MSL STALDLOG 25	COORDINA	.00 FEET	ATA INDEX	H	KNOTS REFRACTION	48.5 1.30005.0	3.5 1.	.6 1.00004	4.3 1.00004	0.9 1.0	7.6 1.00004	4.8 1.00004	2.3 1.00004	9.2 1.00004	7.8	6.5 1.00003	5.8 1.00003	7.0 1.00003	8.4 1.00003	9.9 1.00003	9.4 1.00003	8.3 1.00003	7.2 1.00003	6.1 1.0000	4.8 1.00003	3.6 1.00002	1.00002	2.8 1.00002	3.3 1.00002	3.2 1.00002	•3 1.00002	1.7 1.00002	.3 1.00002	9.8 1.000023	1.00002
STATION ALTITUDE 494C.CO FEET MSL SSEP. 75 ASCENSION NO. 225 ASCENS			OGNIM	IRECTI	EGREESITN	17.							•	274.1				•	•	•	•	•	•	•										•	295.2
ASCENSION ALTITUDE 4940.CC FEET MSL	A C	ONT)	PEED 0	S	KNOTS	52.	21	=	00	20.	51.	51.	52.	52.	52.	53.	52.	51.	33.	55.	57.	28.	.00	60.	.0	90	.00	30.	•	.09	.1:	53.	-	99	~
STATION ALTITUDE 4945.CO FEET MSL 30 SEP. 75 1340 HRS MDT ASCENSION NO. 225 140 HRS MDT ACENSION NO. 225 150 HIS MOT ALTITUDE ALT	R AIR 400402	TABLE IX (C	ENSIT	M/ CU3I	METER	23.	18.	13.	08.	02.	97.	91.	9	81.	76.	2.		•	29.	54.	49.	44	.0	37.	33.	30.	27.	23.	20.	17.	14.	11:	07.	. 60	6
STATION ALTITUDE 4945.CO FEET MSL 350 SEP. 75 1340 HRS MDT ASCENSION NO. 225 GEOMETRIC PRESSURE TEMPERATURE ALTITUDE MYSCOC.C. 125.7 50500.0 112.5 -72.8 50500.0 116.3 -72.8 51000.0 116.3 -72.8 51000.0 116.3 -72.8 52500.0 116.3 -72.8 52500.0 116.5 -72.8 52500.0 116.5 -72.8 52500.0 107.7 -72.3 53500.0 107.7 -72.8 53500.0 107.7 -72.8 55500.0 107.7 -72.8 55500.0 107.7 -72.8 55500.0 107.7 -72.8 55500.0 107.7 -72.8 55500.0 107.7 -72.8 55500.0 107.3 -66.4 55500.0 107.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4 55500.0 77.3 -66.4			EL . HUM	ERCE																															
STATION ALTITUDE 4949.CO 30 SEP. 75 ASCENSION NO. 225 GEOMETRIC PRESSURE T ALTITUDE AIR 49500.0 122.5 -72. 50500.0 119.4 -72. 50500.0 119.4 -72. 50500.0 119.4 -72. 50500.0 119.4 -72. 51500.0 110.3 -72. 52500.0 110.3 -72. 52500.0 110.3 -72. 52500.0 110.3 -72. 52500.0 110.2 -71. 52500.0 107.7 -72. 52500.0 107.7 -72. 52500.0 107.7 -72. 52500.0 107.7 -72. 52500.0 107.3 -66. 52500.0 17.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66. 52500.0 77.3 -66.	S. T		0	DEWPOINT	-																														
STATION 30 SEP. ASCENSION SEP. ALTITUDE MSL FEET 49500. 51000. 51000. 51500.	10.00 FE		TEM	AIR	DEGREES	12	72	73	73	-73.2	-72.9	-72.6	-72.3	2	11	-	2	12	-71.2	6 • 6 9 -	68.	67.	-99-	-66.4	10	9	92	99	-99-	-66.4	-65.3	-64.1	03	61.	9
STATION 30 SEP. ASCENSION SEP. ALTITUDE MSL FEET 49500. 51000. 51000. 51500.	TITUDE 49	NO. 225	PRESSURE		MILLIBARS		5	22.	13					:	102.2	9.66	97.1	94.6	92.3	0.06	87.7	85.5	83.4	81.3	79.3	17.3	15.4	73.6	71.7	10.0	58.3	•	2	3	-
	ATION	ENSIO	EOMETRI	AL TITUDE		4 9500.0	50000	50500.0	51000.0	51500.0	52000, 0	52500.0	53000.0	53500.0	54000.0	54500.0	55000,0	55500.0	26000.0	26500.0	57000.0	57500.0	58000,0	58500.0	23000.0	59500.0	600000	60500-0	61000.0	61500.0	62000-0	62500.0	63000.0	63500.0	64000.0

COORDINATES 83.33 FEET E 03.00 FEET N	INDEX OF REFRACTION	1.000022	00.	1.000021	0000	.0000	1.000019	.0000	0000	0000	0000	.0000	0000	.0000	0000	.0000	00000	.0000	0000	.0000	0000	.0000	0000	0000	.0000	0000	.0000	0000	.0000	1.000011	1.000011
WSTM SITE 4337 7014	SPEED KNOTS	7.1	9 • 9	6 • 3	6.2	5.1	4.2	3.6	3.1	2.8	2.6	2.4	2.3	1.8	1.3	1 • 2	1.4	1.6	1.2	2.2	3.8	4.7	5.5	9 • 4	6.5	9.9	6.9	8.3	9.9	11.0	111.1
	WIND DA	01.	293.4	83.	73.	.59	52.	35.	23.	08.	. 96	88.	19.	87.	01.	18.	24.	29.	83.	29.	14.	05.	01.	97.	02.	08.	14.	24.	30.	m	32.
R DATA 1225 N (CONT)	SPEED OF SOUND KNDTS	568.8	569.2		570.1	•		•	-		- 2	•				:	•	574.6	:		5		576.1		:	-		577.7	~	0	
UPPER AIR 1 274004623 STALLION TABLE IX (CO	DENSITY GM/CU3IC METER	98.6	96.2	3	1.	0	. 9		2		8			2.	-	.6	-	9		2.	-	6	8	ü	5.		2.	-	0	o 1	-
	REL.HUM. PERCENT																														
DT MSL	MPERATURE DEWPOINT S CENTIGRADE																														
40.00 FEET 1340 HRS MDT	AIR DEGREES	-60.0	9.65-	9			28	-58 • 1	-57.8	-57.5	-57.2	-57.0	-56.8	-56 •5	-56.3	-56 •1	-55.8	-55 • 5	-55.4	-55 •1	-54.9	-54.7	-54.4	-54.2	-54.0	3	2	-53.3	3	-52.8	-52 • 2
ALTITUDE 4940.00 FEET 75 1340 HRS MDT N NO. 225	PRESSURE MILLIBARS	50.4	58.9	51.5	56.2	54.8	53.5	2.25	51.0	49.8	48.6	47.5	46.4	15.3	44.2	43.2	42.2	41.2	40.2	39.3	38.4	37.5	36.6	35.7	34.9	34.1			-		30.3
STATION AL 30 SEP. 75 ASCENSION	GEOMETRIC ALTITUDE MSL FEET	64500.0	0.00039	65500.0	0.00099	66500.0	67000-0	67500.0	0.00089	68500.0	.00069	6 69500.0	70000-0	70500.0	71000-0	71500.0	72000.0	72500°C	73000-0	73500.0	74000.0	74500.0	75000.0	75500.0	76000.0	76500.0	77000.0	77500.0	78000.0	78500.0	7 9000.0

E COORDINATES 1783.00 FEET E 403.00 FEET N	INDEX OF REFRACTION	.00001 .00001 .00001 .00000			1.000035 1.000035 1.000006 1.000005 1.000005 1.000005 1.000005
WSTM SIT 403 701	TA SPEED KNOTS			N B B B B B B B B B B B B B B B B B B B	
	WIND JA CIRECTION JEGREES(TN)	131.6 129.9 126.6 122.6	43.00	148.7 152.1 157.3 174.4 180.7 181.5	189.5 193.2 188.4 177.7 1168.0 111.5
225 (CONT)	SPEED OF SOUND KNOTS	578.9 579.2 579.5 580.1	800. 81. 81. 81.	882.	
PPER AIF 2740040 STALLION	DENSITY GM/CUBIC METER	SWEWS.	- 0 6 8 7 5		28.5 27.9 26.7 25.9 23.6 23.6 23.6
5	RERCENT				
ET MSL ADT	PERATURE DENPOINT CENTIGRADE				
13•00 FEET 1340 HRS MDT	TEWE AIR Degrees	-52.4 -52.1 -51.9 -51.6		2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	IN PERMANAN
TITJDE 494 No. 225	PRESSURE MILL I34RS	29.6 28.9 27.6 27.6	25.3 25.7 25.7 24.6 23.6	22.9 22.4 21.9 20.9 19.9 19.5	18. 118. 117. 115. 115. 115.
STATION AL 30 SEP. 76 ASCENSION	3 EOMETRI C ALTITUDE MSL FEET	79500.C 80000.C 80500.C 81000.D 81500.D	82000.0 82500.0 93000.0 83500.0 84500.0	85000.0 85500.0 86500.0 87000.0 87500.0 88500.0	89500.0 90500.0 91500.0 91500.0 92000.0 92500.0 93500.0

UPPER AIR JATA 274004C225 STALLION TABLE IX (CONT)	REL.HUM. DENSITY SPEED OF PERCENT GM/CUBIC SOUND METER KNOTS	22.5 590.9		21.5 591.3	21.6 591.6	20.6 551.8	0 603 1 607 0
STATION ALTITUDE 494C.CO FEET MSL 39 SEP. 75 1340 HRS MDT ASCENSION NO. 225	PRESSURE TEMPERATURE AIR DEWPOINT MILLIBARS DEGREES CENTIGRADE	-43.1	42.9	-42.7	-42.6	-42.4	-47.2
TITUDE 49	PRESSURE MILLIBARS	14.9	14.6	14.2	13.9	13.€	12.2
STATION ALTITUDE 4 39 SEP. 75 ASCENSION NO. 225	GEOMETRIC PRESSURE ALTITUDE MSL FEET MILLIBARS	94500.0	95000.0	95500.0	96000,0	96500.0	0 0000

WSTM SITE COORDINATES 433783.00 FEET E 701403.00 FEET N

	. 51	35	35	35	35	*	40	*	74	#	74	40			(1)			-						33	
INDEX OF REFRACTION	.0000	00	0000	.0000	0000	.0000	0000	.0000	0000	.0000	0000	.0000	2000	.0000	0000	.0000	0000	1.00000	4	1.00000	0000	.0000	0000	1.00000	0000
ATA SPEED KNOTS	5•3	4.6	4.2	3.7	3.4		5.7	6.9	7.8	8.7	9.6	1.6	1.06	1.6	0		2.	13.3	M.		-				
WIND DA DIRECTION CEGREES(TN)	19.4	16.4		16.4	109.3	38.	54.	57	54.	52	50.	149.2	48.	9 6	44	41.	38.	136.8	40	46.	52.				
SPEED OF SOUND KNOTS	0	591.1	91.	591.6	551.8	-	592.2	- 2	2.	592.	593	593	593.	593.	593	5.9	594.	594.	59	5.9	595	5.9	596	597	
DENSITY GM/CU3IC METER	22.5	22°C		-		0	9	6	8			-	-		•				=					13.2	•
REL.HUM. PERCENT																									
TEMPERATURE IR DEWPOINT REES CENTIGRADE																									
TEMF AIR DEGREES	-43.1	-42.9	-42.7	-42.6	-42.4	-42.2	-42.1	-41.9	-41.7	-41.5	-41.4	-41.2		6 · Ch -	-40.7	-40.6	40.4	-40.5	-40.0	-39.6	6	-38.8	-38.4	-38.0	-
PRESSURE MILLIBARS	14.9	14.6	14.2	13.9	13.€			12.7				11.5			10.9			10.2				9.3		8 • 9	
GEOMETRIC ALTITUDE MSL FEET	94500.0	5000.	95500.0	96000,0	ċ		-	-	ċ	-	0	.00000	00200	01000.	01500.	02000	ċ	0300	03500	000000	04500	02000	05500	105000.0	06500

N ALTITUDE 4940.00 FEET MSL	1340 HRS MDT
AL TITUDE	75
STATION	30 SEP. 75

MANDATORY LEVELS 2740040225 STALLION

TABLE X

WSTM SITE CCORDINATES 433783.33 FEET E 701403.00 FEET N

SPEE	_	2.3	4.7	C•4	9•9	2.8	9.	7.7	3.8	9.2	11.8	9.5	22 • 9	2	-	17.5	2	2	16.7	S	M	7.3	2.8	1.2	11.1	6.5	0. 4	5.1	13.3
WIND	DEGREESTIN	156.0	3	-	122.8	58.5	122.8	171.2	144.5	217.7	226.6	249.3	254.6	248.4	253.8	255.6	262.9	279.9	265.8	246.4	262.8	300.0	211.5	171.1	132.3	139.7	181.4	80.5	0
REL . HUM.		25.	33.	41.	. 44	28.	19.	21.	22.	23.	20.	22.	24.																
EMPERATURE DE WP OI NI	CENTIGRADE	2.4	1.4	6.1	-4.5	-11.8	-17.7	-21.2	-25.2	-30.0	-37.0	-43.2	9.64-																
AIR	DEGREES	23.5	-	11.8	•	•	3.5	-1.5	•	-13.3	-19.9		-36.5	0.44-	-53.6	-59.1	9	-72.7	-71.5	-66.4	-66.4	9	-57.5	-55.3	-52.5	9.05-	•	-43-1	- 40.1
OPOTENTIA	FEET	5026.	6743.	8535.	10412.	12405.	14546.	16839.	19303.	21972.	24876.	28073.	31636.	35726.	40 52 0	43305.	46421.	4 9979.	54279.	58648	61301.	64416.	68173.	32	88	-	26	0	89
PRESSURE GEOPOTENTIAL	MILLIBARS		800.0	0.0	0	0												125.0						40.0	30.0	25.0	20.0	15.0	10.0

IH	MDT	HRS	1350	3. Sr.P. 16 1350 HRS MDT	3: SEP.
17	15	FrET	2967.33	ALTITUDE	314T:04
SIGNIFIC					

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	10.5	5.
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w	0	2
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	1 11.2	
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-	. 4	I
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-		
5		
-		

TABLE XI

.ETh SITE CCOMPILATES 4E8580.00 FEET E 1.5545.00 FEET N

13×		.KaDr
EKATURE	AIR DEEPDIET	OLT CO.
TENP	AIK	DEGRIFS SETTIGEDE
GEOMETRIC .	ALTI190E	TATE ISH
ESSURF		114436

REL HUM.	22
ERATURE Dempojat Fertigrade	111111 4 2 3 3 3 3 3 3 3 3 5 7 5 7 5 7 5 7 5 7 5 7
TENPE AIR DEGREES	
F GEOMETRIC ALTITUDE S MSL FEET	14236 14236 14236 14236 14236 14236 14236 14236 14236 14236 14236 14236 1436 1436 1436 1436 1436 1436 1436 14
PRESSURF MILLIGARS	88888888888888888888888888888888888888

1 51	MDT
11	50 HRS
3989.00	135
NLT111JDF	,5
STATION	3. S.P. 76 1350 HRS MDT

UPPER AIR DETA 2740020662 FHITE SANDS

4577 SITE CCOMUINATES 458580.00 FEET E 185045.00 FEET N

TABLE XII

INDEX OF REFRACTION	1.000253	02025	0025		13024	13023	0023	00023	00022	20002	00021	0021	00021	96920	.00000	61000	6100	900018	91000	81000	00017	00017	20000	20000	9100	91000	00016	0015	(2)
SPEED KNOTS		•	7.9	•	•	•	•	5.1	•	•	•	•	•	* * *	•		•	•	•	•	•	•		•			•		•
WIND DA	76.0	2.	-		7.	•	3	6	5	*	2.		3.	102.3					3.		0	• 9		-	•		5	÷	
FEED OF SOUND KNOTS	676.2	72.	71.	650	67.	. 99	. + 9	63.	61.	.09	58.	56.	55.	653.8	52.	51.	50.	+ 6 +	48.	49.	. 64	48.	47.	46.	45.	43.	42.	+ - +	39.
DENSITY S GM/CUBIC METER	1020.5	013.	000	07.	74.	61.	48.	36.	23.	=	.66	87.	76.	•	51.	38.	25.	12.	.66	84.	19.	. 95	45.	33.	22.	:		.06	e 3
RELOHUM. PERCENT	17.6	4	Š	4.	•	•	•	•	•	•	. 9	•	. 9	•		5.	ò		7	7.	-				:			8	
EKATURE Dev point CE. Tigrade	- :	•		•			•		•					0	=	3	-15.4	-	8	8		8		26.	21.		5.	23.	100
TEMP AIR DFGREES	27.3	7		•	•			•	•	3			•			•			•						. 8	2	•	-2.2	13.6
PRESSURE	682.5	.09	651.5	.36.	651.9	837.2	7 .	778.7	764.8	751.2	1.	724.7	-	0.660	686.2	3	661.1		37.	5	13.	0	.06	79.	68.	5.853	47.	37.	27.
SEGMETRIC ALTITUDE ASL FEET	3789.0	500.	000	3000	000	6.0059	.000	500.	.000	500.	00	2009	10000	050	1000.	1500.	.00	2005	.000	500.	000	500.	20009	, 20c	.000	0	.000	500.	.000

• • • • • • • • • • • • • • • • • • • •	200	50 HRS MOT					- 4	UASON FEET N
				TABLE XII (C	(CONT)			
C PHESSURE	TEMP	FRATURE	REL . H. M.	YTISK	CEC	2	4	INDEX
HILLIBARS	CEGNEES	CENT 154ADS	2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	METER	KNOTS	PEGREES (TN)	X 107 X	REFRACTION
5		6.46.	19.1	71.	638.	67	1.3	5015
507.	5	25	19.6	0	636.	1.5	1.1	03015
497			19.9	52.			3.6	614
487.	-8.2	27.	19.5	1	634.	91.6	8.9	4130
176.			•	3.3.	533.		•	-1-1
.694	0	29.	19.0	20.		O		9014
459	-	36.		11.	630.	•		0000
450.	•	-11.3		.20	629.	36.	•	01000
. 1 + 1		12.		93.	627.	3.		50013
433.	•	3	•	• + 0	626.	5		26013
424.	•	+	•	14.	624.	•	•	00013
415.	-15.9		•	.59	623.			21000
404	-	10	19.0	554.1	622.5	192.7	9.3	1.200126
399.	9	16.	•	47.	621.	63.		000012
391.	23.	7.	•	38.	619	. +6	• .	2000
383.	•	8		30.	618.	•	•	11000
375.	22.	. 6	•	22.	919	97.	•	11000
367.	24.	6.07-	19.5	+	. 19	. 66		00011
354.	25.	-42.3	•	90	013		•	11000
352.	;			98.	6110	03.	-	00001
345,	28.	44.		.06	609	. 50		11000.
338.	23.	•	ò	93.	608.	. 80	3.	01000
330.	ċ	-46.1	20.0	75.	909	13.		20010
323.	•	7.	0	67.	655	6 1	2	0000
317.	2.	6.1.	ò	53.	.469	25.	•	01000
310.	-33.8	48	0	51.	602.	35.	ò	0000
303.	37	26.	•	43.	.109	4 13	•	60000
97.	-33.1			34.	6011			00000
290.	-35.1			27.	599.	47.	•	60000
284.	-37.1			. 6 1	.365	.0	-	20009

.. AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USEN IN THE INTERPOLATION.

B DATA B662 ANDS	SPEEUSOUNG	10 un 10	0 1 0 0 0 0 0 0 0 0 0	4 = N 10 A	5 579 5 578 5 578 5 578 5 578
PPER AIR SATA 2743029662 AMITE SANOS TABLE XII (CONT)	DENSITY GM/CUBIC METER	412.0 434.7 337.5	393.5 393.5 376.8 376.8 36.9	357.6 351.1 344.2 337.5	324.5
	REL. HUM. PERCENT				
STATION ALTITUDE 3989.63 FEET MS; 30 SEP. 76 1350 HRS MDT ASCENSION NO. 642	TEMPERATURE AIR DEMPOINT DESREES CENTISRADE	1 1 2 3 3 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	7 · · · · · · · · · · · · · · · · · · ·	1 500.4
TITUDE 396	PRESSURE MILLIBARS	277.9 271.9 255.9	254.4 254.4 248.8 243.2	232.4 227.1 221.9 216.8	207.0 202.2 197.5
STATION ALTIN 30 SEP. 76 ASCENSION NO.	GEOMETRIC ALTITUDE MSL FEET	33500.0 34000.0 34500.0	35000.0 35000.0 36000.0 370000.0	37500.0 38400.0 38500.0 39500.0	4000000 4050000 4150000
				39)

WSTM SITE COORDINATES 498580.00 FEET E 195045.00 FEET N

REFRACTION INDEX

SPEED

WIND DATA
DIRECTION SPE

SPEEU OF SOUND KNOTS

1.00009	1.36629	2 1.00008	1.00008	7 1.50000	9000001 9	1.00038	4 1.00008	8 1.00038	3 1.00007	1.00007	4 1.00007	1.30007	1.00007	4 1.CG007	.4 1.500075	1.00004	1.50006	1.30066	9000001 8	9000001 9	1.00006	4 1.50006	1.56004	1.00005	1.00005	1.00005	9 1.62605	1 1.00005	5 1.00005
2	a	20	9	-	~	3	7	9	0	-	3	-	-	9	7	3	7	7	~	-	0	0	5	0	*	-	1	2	
43.	45.	-	45.	+ +	46	47.	43.	52.	5+	540	54.	53.	53.	52.	251.3	51.	51.	.75	54.	55.	.95	54.	29.	63.	669	75.	76.	76.	76.
97.	.96	. 4 4	93.	12.	90.	99.	37.	.98	34	83.	32.		90.	19.	578.3	76.	74.	73.	71.	69	68.	450	. 4 9	42.	.19	59.	38.	56	55.
12.	94.	1	93.		76.	10.	63	57.	.10	44.	37.	3.3.	24.	- R -	312.2	90	.00	36.	.06	. 78	19.	7 4.	.69	. 49	60.	55.	50.	45.	39.
	-39.1		1.14-	11311	-43.2	-44.3	-+5.5	-46.7	8.1.	-43.6	4.64-		-50.9			-54.1			-57.9		ċ	-	-63.1	10401	-65.7	-67.0	-68.0	-63.3	9.69-
		265.9				1	37.	32.	27.	21.	. 9	:	07.	32.	197.5	2.		3.		+	ò	9		8	+	-	147.5		1.0.1
3500.	4000+	500.	5300.	Sau.	.0009	.0059	7000.	00	4.000	8500.	.000	.0056	.0000	3560.	01	500.	2000.	2500.	.00	3500.	.000	503.	ċ	500.	00	.005	47000.0	.005	.00

15.	1DT
FEET "S	HRS 1
3969.33	1350
	4
P. T.	7 0 NO
STATION	30 SEP. 75 ASCENSION NO. 6

1743325652 AHITE SAMDS

ASTM SITE COORCINATES 498580.00 FEET E 185245.60 FEET N

TABLE XII (CONT)

INDEX OF REFRACTION	1.000051	.00005	*0110.	6000	60000	1000	00000	50000	0000	0000	00000	0000	00003	00000	50000	50003	00000	0003	0000	50000	2000	50000	00000	0002	2000	5000	20000	002
SPEED KROTS	36.9	-,		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	O	•	ò			1.8.1
DIRECTION SEGREES(TN)	276.9	79.	67.		650	. 69	.89	25	32.	15.	19.	29.	43.	. + 0	72.	74.	75.	75.	74.	12.	.69	65.	.10	58.	56.	53.	51	٠ ت
PEED OF SOUND KHOTS	554.6	52.	5.00	49.	.6+	48.	48.	4.4	49.	8	.6+	50.	.15	52.	53.	. 45	. + 5	. 55	.95	57.	58.	. 65	60.	.19	62.	63.	0	65.
DENSITY S GM/CUBIC METER	234.7	24.	.07	10	. 40	.66	+	6		0	5	173.4		0	. 9	-	. 1	3.			-	1.	+		1.	+	110.9	-
REL.HUM. PERCENT																												
TEMPERATURE AIR DESPOINT DEGREES CESTIGRADE	-73.5	72.	-73.0	73.	-	-73.9	3	÷	-14.8	10	+	-73.6	2.	72.	-	73.	73.		68	63.	1.		65.	17	.0	+	-53.4	
PRESSURE MILLIBANS	136.6	•	9 6	, ,	17.	+	=	3	5	2	0	7.	10	2.	0	2			-		7.	in	3.	-	0			5
GEOMETRIC ALTITUDE MSL FEET M	445000.0	9500.	0000	1000.	1500.	2000.	2500.	3000	3500.	54000.	4500.	50000	5500.	.0009	6500.	7000.	7500.	8000	8500.	90000	9500.	.0000	0500	1000	1500.	2000	2500.	3000.

E COOKLINATES 580.00 FEET E 045.00 FEET N	INDEX OF REFRACTION	.00002	1.000021	.00002	.0000	100000		100000	.00003	.00001	.0000	.00000	100000.	.0000	10000	10000	.0000	100000	100000	. 56601	. 50001	10000	10000	100000.	10000.
#STM SIT 438 185	SPEED KHOTS	. 3	13.2	- (, ,	•			•		7.5			•	•						0			:	
	AIND DA DIRECTION DEGREES(TN)	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	243.6	- 0	37.	34.	32.	36.	32.	. 95		*	ŝ			• 4		•	2.	2.	000	1.	17.	27.	38.
3.662 8.65 A. 'S (CONT)	SPEED OF SOUND KNOTS	9 .	8 9	30	6.9	.69	6 6	70.	70.	70.	::	72.	72.	72.	73.	16.	. 5 /	74.	75.	75.	76.	76.	76.	77.	77.
274532386 274532386 4411E 54. TABLE XII (CO	DENSITY S GM/CUBIC METER	1 -	4.66		- 0	7.				:	9 6	:	•	8	. 9	•	• •	0		1.	5		2.	-	0
	AEL•n∪M• PERCENT																								
1350 HRS MDT	TEMPERATURE 13 DESPOINT DESREES CE TIGRADE	9 10 10 10 10 10 10 10 10 10 10 10 10 10	159.5	20	5.3	59.	-59.2	59.		90 0		-	7.	.0	20	•	7.00	5				-54.2	3	~	-53.2
ALTITUDE 398	PRESSURE MILLIBARS			1.	5.00		52.4	40.0	48.7	47.6	2 0 2	44.3	43.3	42.2	41.2	10.3	38.4	37.5	36.6	L)		34.1			-
STATION ALT SE SEP. 76 ASCEMSINE N	SEOMETRIC ALTITUDE SSI FEET	3500.		Sect.	6500.	7000.		00589	00.	00	70500.0	.00	00	00	72500.0	9 9	00	00	8	00	20	2	20	2	8

-		
3989-03 FEET -51	1350 HRS MDT	
ALT1103		00.
STATION	3. 31P. 76	15re 151

JPPFF AIN 1.01A 2740520662 5411E SANCE

#STM SITE COOKUINATES #88580+00 FEET E 185045+00 FEET N

TABLE XII (CONT)

INCEN	10	KEFRACT I
ATA	SPEED	KACTS
WIND DATA	LIRECTION SPEED	PEGREES(TN) KNOTS REFRACTI
SPEED OF	SOUND	KNCIS
DENCITY	SMICUBIC	METER
REL . HUM.	PERCE: 1	
TEMPERATURE RELOHUM. DENGITY SPEED OF	DE DOINT PERCE, I SMICUBIC SOUND	CE TINRADE
TEMP	118	STEES
PRESSURE		WILLISOFS
GEUMETAIC PRESSURE	.LTITUDE	SL FEET MILLISSES SESREES

CMETA	PRESSURE	EMPFRA	:	ENCIL	SPEED OF	WIND DA	-	INCEX
		00 3	ERCE	SMICUBIC	SOUN	IREC	4	0F
BEE	MILLISOFS	DESTEES OF THIRADE		METER	KNCIS	FEGREES(TN)	2	KEFRACTION
8500.	31.	?			78.	152.4	a.	1.000011
9000.	33.	7.		7	78.		B • 4	1.300011
.0056	. 67	52.		46.7	19	•	3	1.000010
6.00000	28.9	-52.0			579.4	155.2	1.5	1.560010
.30co	.02			4	74.	1		1.5555412
1 200.	27.	:		43.3	80		6.6	1.000010
1500.	27.	51.		2	96.	25.		1.000.099
2000	26.	0		-	.18	. 7	16.5	1.300009
2500.	25.	71		:	.18	20.	•	1.000009
3000.	25.	*			82.	9	•	1.000.27
3500.	24.	:		•	82.	5		
4000 ·	24.			1.	62.	.70		
4533.	23.	. +3.9		•	53.	7.		
50009	22.	48.6		5	83.	3	6.3	
5500.	22.	-48.3		+	8	:		1.000009
.0009	21.	1.		3	. 48	2	•	•
6500.	21.	-47.6		3	85.			-
7000.	.07	-47.3		2	85.	7.	•	
7500.	20.			-	. 9 4	4	•	1.000001
8000	20.	•			86.		7.4	1.000007
8500.	19.	-46.3			. 98	ò	•	1.300007
.0006	19.	- 16.0		•	10	-	•	1.000001
9500.	18.	-43.7		*	67.	2	•	1.000006
00000	14.				87.	~	•	1.000038
0200	17.				9 0	'n		1.000006
1000	17			•	88.	•	•	1.000004
1500.	17	9.44-		•	89			1.260004
2000.	-	÷		3	89.	3.	•	1.500000
2500.	16.				3	176.4	7.7	1.300036
3000.	-	-		+	5	.)		1.000005

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3989.33 FEET	1350 HRS MDT	
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3411173		0
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2	32 SEP. 70	ASCENSION 10.
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UPPER AIR DATA 2743023662 WHITE SANDS

ASTM SITE COORDINATES APRISONO FEET E 185445.07 FEET N

TABLE XII (CONT)

NDEX	40	KNOTS REFRACTION
T A	SPELU	KINGIS
WIND DATA	DIRECTION SPEED	"EGREES(TN)
96	0	(0
SPEED	SOUN	FNCT
DENSITY	SM/CUBIC	METER KNCTS
REL.HUM.	PERCENT	
ERATHRE	A DE POINT PERCENT GM/CUBIC SOUND	CE-TIGRADE
LEMP	AIR	DEGREES
PRESSURE		MSL FEET MILLIBARS DEGREES
GEUMETRIC	ALTITUDE	MSL FEET

22.1		142.5 141.9 141.9 141.0 141.0 141.0 141.0 141.0 141.0
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	12.2 -40.2 11.7 -39.6 11.4 -39.3 11.2 -39.0 10.9 -39.8 10.5 -38.5

MA			
	11	MDT	
	4	HRS	
	SINTION ALTITUDE 3009. 13 FRET 151	1350 HRS MDT	
	3.5		4.2
	300		•
	111	0	NO
	7	7.	101
	1110	32 SEP. 70	ASCENSION NO. 662
	-5	3.	57

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.5TR 51TE COOMUINATES 4M8580.00 PEET E 185045.00 FEET N

TABLE XIII

PRESSURE 5	EDPUTENTIAL	-	⋖	PEL.HUM.	QUIL	ATA
26.61.13.2	10	AIR	DEAFCINT	PERCENT	DEGREES (IN)	SPEED
	;	1				
453.9	5064.	22.4	2.0	26.	92.1	5.5
3.00%	6777.	17.9	-1.7	. 9 ?	81.5	5.2
753.0	8572.	13.2	-5.6	27.	113.6	5.1
700.0	13457.	8.1	-4.7	27.	100.5	4.3
550.0	: 2431.	.0 • #	-17.2	16.	144.7	14.3
6.00%	14586.	3.7	9.61-	:7.	115.5	8.0
353.0	: 6383.	-1.5	4.2:-		144.6	6.3
503.6	19150.	-7.4	+.97-	26.	108.4	6.6
450.0	22019.	-12.7	4.1	. 6 :	138.2	7.0
430.c	24932.	-18.0	-36.6	. 6 .		6.3
350.0	28141.	-27.3	-43.4	20.		11.9
330.0	31721.	-34.7			244.6	27.4
250.0	35A28.	-42.9				43.6
20007	40456.	-52.1				4.69
175.0	43447.	-59.2				71.5
150.0	46455.	-67.4				
125.0	53138.	-73.4				15.7
103.0	5+374.	-74.2				6.6
90.0	58732.	-68.4				18.2
70.07	61152.	5.49-				20.1
0.09	64473.	0.09-				14.1
5.05	6913.	-59.1			239.0	7.3
43.0	72843.	-56.2			76.1	6.7
39.0	78489.	-52.5			156.4	8.6
75.0	82778.	8.64-			115.0	
20.0	A7602.				3.66	
15.0	93016.				169.9	5.3
10.0	1:2992.	-37.6				

AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USEN IN THE INTERPOLATION.

